

ABSTRACT

The present invention is drawn to an apparatus and method for providing secure network communication. Each node or computer on the network has a secure, intelligent network interface with a coprocessor that handles all network communication. The intelligent network interface can be built into a network interface card (NIC) or be a separate box between each machine and the network. The intelligent network interface encrypts outgoing packets and decrypts incoming packets from the network based on a key and algorithm managed by a centralized management console (CMC) on the network. The intelligent network interface can also be configured by the CMC with dynamically distributed code to perform authentication functions, protocol translations, single sign-on functions, multi-level firewall functions, distinguished-name based firewall functions, centralized user management functions, machine diagnostics, proxy functions, fault tolerance functions, centralized patching functions, Web-filtering functions, virus-scanning functions, auditing functions, and gateway intrusion detection functions.